2013 White Lake Aquatic Vegetation Control Plan

LDWF, Inland Fisheries

White Lake is one of two large natural lakes within the Mermentau River basin which includes dozens of smaller lakes and interconnecting bayous totaling over 120,000 acres of coastal marsh water bodies. Generally turbid year round due to rice cultivation and large windswept open expanses of shallow water, submersed vegetation is seldom a problem compared to adjacent private marshes. However, floating vegetation such as hyacinth, water lettuce, and salvinia can choke smaller lakes and interconnecting bayous in some years. There also hundreds of miles of public and private interconnecting canals associated with this waterbody. LDWF district 5 crews spend a majority of their time spraying these canals to facilitate access to public areas as well as private hunting/fishing areas.

Water body Information

Waterbody Type:

Natural lake in the coastal marshes of Vermilion parish with associated man-made canals

Parish/Location:

Vermilion Parish, LA

Date Created:

N/A

Size (surface acres):

Lake: 56,000 acres
Canals: ~1,000 acres

Water shed:

Lies within the Lake Sub-basin of the Mermentau River Basin.
Watershed Ratio: Unknown

Impoundment:

N/A

Water Control Structures:

Description:

Schooner Bayou Locks

This lock-gate structure was constructed in the 1950's by the U.S. Army Corps. of Engineers as a key component to creating the Mermentau Basin Project. The objectives of the Mermentau Basin Project program were to: conserve fresh water in the lake sub-basin by maintaining normal to

above normal lake stages in Grand and White Lakes for agricultural purposes; prevent uncontrolled tidal inflow during the agriculture irrigation season (April through August); and maintain minimum water levels for navigation.

Age and Condition:

Originally constructed in the 1950's
Condition - Good

Drawdown Potential:

N/A

Operation Procedures:

U.S. Army Corps. of Engineers owned and operated.

Ownership:

State of Louisiana owns the water bottoms and the La. Dept. Wildlife & Fisheries manages the fish and wildlife resources.

Pool stage:

Approximately 1.2ft. NAVD 88
Average Depth – 5ft.

Border waters:

N/A

Past Control Measures:

Biological:

Giant salvinia weevils were stocked in the Warren Canal in the fall of 2012.

Chemical:

Typically, invasive aquatic vegetation is not a problem in the lake proper. Contact herbicides are primarily used to control infested areas when needed. Herbicide applications have been made on nuisance plants such as water hyacinth and common salvinia in areas that are used by the public. To control water hyacinth, alligator weed and primrose, 2,4-D was applied at a rate of 0.5 gallons per acre. Diquat, glyphosate, and imazamox were applied at 0.75 gallons per acre to control common and giant salvinia. Appropriate non-ionic surfactants will be used to improve the effectiveness of these treatments at a rate of 0.25 gallons per acre.

In 2012, foliar herbicide applications were made on nuisance plants such as water hyacinth, alligator weed, primrose, and common salvinia in White Lake. A total of 574 gallons were applied to 537 acres

Physical:

None

Aquatic Vegetation Status:

Biomass:

Common Salvinia (600 acres)
Alligator Weed (500 acres)
Water Hyacinth (700 acres)
Giant Salvinia (240 acres)

Limitations:

- Diploid grass carp present for approximately 15 years but not yet recognized as a problem probably because of their inability to reproduce in soft water
- Draw-downs not an option
- Vast expanses of open water; noxious aquatic floaters (NAF's) a moving target

Recommendations:

Biological Control

Giant salvinia weevils are scheduled to be stocked in 2013 in associated canal systems within White Lake.

Chemical Control

Continue to control emergent and floating vegetation with contact herbicides as needed at the rates listed above.

Physical Control

Control of invasive aquatics may be accomplished by modifying the operation plans for the Catfish Point Lock to allow increased amounts of salt water into the lake sub-basin. This would only be implemented during periods when agricultural interests would not be significantly impacted.

White Lake Map